

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number
WO 2005/035900 A1

(51) International Patent Classification⁷: **E04B 2/84**

(21) International Application Number:
PCT/KR2004/002618

(22) International Filing Date: 13 October 2004 (13.10.2004)

(25) Filing Language: **Korean**

(26) Publication Language: **English**

(30) Priority Data:
10-2003-0071166 13 October 2003 (13.10.2003) KR
10-2004-0016573 11 March 2004 (11.03.2004) KR
10-2004-0057296 22 July 2004 (22.07.2004) KR

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant and

(72) Inventor: MOON, Su-Chang [KR/KR]; 69, Jangrim-dong, Saha-gu, Busan 604-040 (KR).

(74) Agent: JEON, Hong-Ki; 405, Sangji BD, 1125-10, Guro-dong, Guro-gu, Seoul 152-050 (KR).

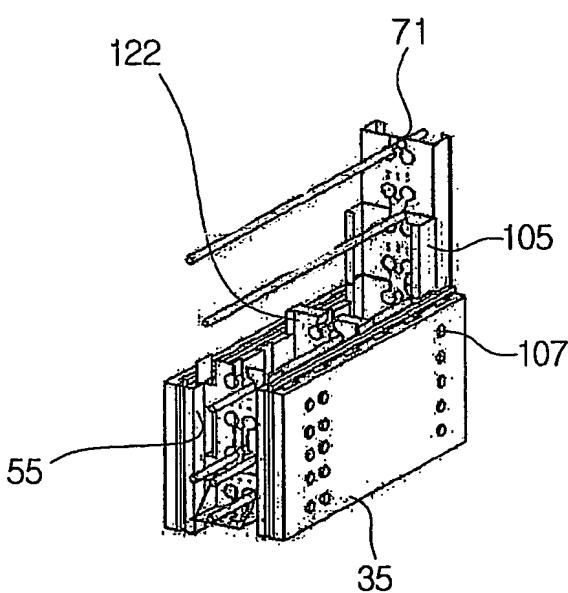
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FIBER REINFORCED CEMENT BOARD AND FOAM PLASTIC INSULATED STAY IN PLACE FORMS SYSTEMS WITH PERFORATED METAL STUD FOR CONCRETE REINFORCED STRUCTURE



(57) Abstract: Disclosed herein is a form panel system that is capable of constructing a frame structure including a wall of a concrete-based building and a concrete structure including various retaining walls for civil-engineering works. The form panel system comprises compression cement boards disposed opposite to each other while being spaced a predetermined distance from each other, the compression cement boards being reinforced with fiber materials, reinforcing boards obtained by forming the compression cement boards in predetermined shapes, or foamed plastic heat insulating panels, and metal plate studs disposed between the compression cement boards. The metal plate studs are composed of metal plates having predetermined thicknesses and distances therebetween, which are selected depending on the durability of concrete. Each of the metal plate studs has at least one opening formed therein. Each of the metal plate studs is provided at both opposite side ends thereof with bent parts. The metal plate stud is fixed to the respective compression cement boards by means of fixing pieces, and concrete is injected and cured into the space between the compression cement boards, to which the metal plate studs are fixed and the foamed plastic heat insulating panels are attached. According to the present invention, the fiber-reinforced

compression cement boards, the foamed plastic heat insulating panels, the metal plate studs having the openings are vertically or horizontally arranged without limits.

WO 2005/035900 A1